Economic Aspects of Family Farming in the European Context

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Abstract

The International Year of Family Farming (IYFF) in 2014 has raised a number of issues related to the economic and policy context of family farming (FF), which covers a wide variety of organisations of farm production. In this paper, after some conceptual discussion, definitional issues are considered, in both qualitative and statistical terms, with evidence based mainly on Eurostat and FADN data on farm labour use, legal type and farm specialisation. The need or otherwise of quantitative thresholds is discussed, as well as the sensitivity of the scale of FF in the EU to different definitions. The economic nature of FF is then analysed, in terms of its significance for EU and national policy. Challenges to FF are identified, and the importance of farm succession legislation and taxation for the persistence of FF is stressed. Finally, based on the previous material, a number of discussion points are offered, for consideration in future economic analysis.

Keywords: Family Farming, EU

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1. Introduction

Family farming (FF[2]) has been of long-term, even central, interest to European agricultural economists, going back in fact to the physiocrat Quesnay and the classicist Adam Smith, many of whose examples come from farming which then, as now, was largely carried out by families. However, feudalism, post-feudalism, colonial plantations and, in the last century, socialism have all provided different frameworks for families working in agriculture. This paper is intended to promote discussion on these areas in a European (and mainly EU) context. It does not pretend to present much new analysis, conceptual or numerical, but offers some areas for consideration, followed by a number of "discussion issues".

Chayanov (1925) developed a theory of peasant farm organisation contrasting with the capitalistic model of business units combining the production factors of land, labour and capital under impersonal market pressures. In the 1970s and 1980s, neoclassical farm household models were based on dual production and consumption roles (Singh *et al*., 1986; Taylor and Adelman, 2003). Based on the economic theory of the family and household (Becker, 1974; Pollak, 1985), Schmitt (1988) stressed the importance of off-farm opportunities for farm-based labour in determining farm sizes and structures. He also pointed out the changing nature of the European family in terms of size and social security, as well as developments in farming technology (and, he might have added, in non-farm sectors).

Allen and Lueck (1998) examined historical (mainly North American) examples of agricultural organisation, and used an econometric Coasian analysis of data from about 1000 farms in

[1] Work for this paper was partly undertaken in spring 2014 for an enquiry by the European Parliament's Committee on Agriculture and Rural Development (COMAGRI): see presentations at http://www.europarl.europa.eu/committees/fr/agri/events.html#menuzone. However, no part of this paper may be taken as reflecting the views of the Parliament or any of its components or agencies.

[2] In this paper, "FF" denotes either "family farming" or "family farms" according to context.

British Columbia and Louisiana. With some simplifying assumptions in their theoretical model, e.g. no hiring of labour by family farms, and no leasing or transfer of assets, they found that "*seasonality and randomness so limit the benefits of specialization that family farms are optimal, but when farmers are successful in mitigating the effects of seasonality and random shocks to output, farm organizations gravitate toward factory processes and corporate ownership*". Compared to partnerships and corporate farms, the family farmer faces no moral hazard in allocating labour (s/he is the complete residual claimant), but cannot specialise task effort, and faces higher capital costs (which are spread out amongst a larger number of owners).

Within the UK, Gasson *et al*. (1988) applied a multi-disciplinary approach, drawing attention to the family development cycle, the processes of inheritance and succession, the roles of farmers' wives, and multiple jobs. They identified opposing tendencies within the population of farm businesses: family forms of organisation and relationships may be less relevant to farming at the lower end of the size scale, but more relevant to the conduct of successful large farm businesses. Hill (1993; 2012) has provided a series of useful EU-wide analyses (some of which is relied on below) based on FADN data for commercially sized EU farms, focussing on the measurement (or lack of it) of income and wealth. On a global scale, Brookfield and Parsons (2007) have drawn attention to the survival of family farming in a variety of policy and wider socio-economic developments.

2014 is the UN/FAO-designated International Year of Family Farming (IYFF), intended "*to promote international awareness and support country-owned plans aimed at strengthening the contribution of family farming and smallholders in eradicating hunger and reducing rural poverty leading to sustainable development of rural areas and food security*" (FAO, 2013). A number of official and non-official documents have been drafted, and national and international bodies - some but not all specific to FF - are participating in FAO Regional and Global Dialogues (Davidova and Thomson, 2013; Matthews, n.d.). These Dialogues are intended – *inter alia* – to determine future action in terms of possible policies and policy-making and needed research and information.

2. The Significances of Family Farming

While this paper focusses on economic aspects of FF, agriculture involves a number of important interactions with policy for other areas, and indeed "non-economic" FF roles have their own economic aspects (which are not much explored here). These other roles and significances can be grouped as:

Political: Agrarianism has a long and continuing philosophical and political role, as currently reflected on a global scale in the IYFF. From the 1958 Stresa conference to the "European Model of Agriculture", the CAP has had the maintenance of family farming as a major (if sometimes implicit) goal. There is a current Commission webpage[3] on FF, and several conferences and meetings are being held

Social: regardless of the political and (below) economic importance of FF, farming by families has been, and still is, of personal importance to many Europeans, either through past or current relations who have owned or worked on farms, or because they value the cultural experiences provided by (especially local and regional) farming. Despite the demographics of smaller families and urban residence, to "have come from a farming background" is still a mark of some personal distinction In Europe (perhaps unlike e.g. African cities).

Environmental: for several decades, increased social valuations have been placed on the rural environment, whether landscape, biodiversity or lack of pollution. While the identity of actual management of the farming environment may be of secondary concern, long-established local families (or associations of these, as in communes/communities) seem to be preferred to absentee owners, wardens/rangers or agency/council officials. However, there are unpopular exceptions, such as untidy or excessively profit-minded families, and pro-nature trusts and charities, and evidence on environmental performance is both scanty and mixed (Potter and Lobley, 1993). An OECD (2005) paper concludes that "Farmers that are young, educated, and with a business-oriented approach to their operation appear most likely to take positive actions that would produce NCOs [non-commodity outputs, such as environmental services] or reduce negative externalities" (such as pollution). This would favour larger farms, whether family or non-family.

Economic: as the main focus of this paper, this encompasses such matters as shares of resource use and outputs (farming and non-farming), levels of efficiency (static and/or dynamic), and equity (e.g. between small and large farms; and between low- and high-income farmers). Moreover, given the high levels of public expenditure on European agriculture through the CAP (and perhaps an equal amount otherwise, e.g. national

[3] http://ec.europa.eu/agriculture/family-farming/index_en.htm.

government spending and tax exemptions), the purely financial view cannot be ignored. Together with regulations (e.g. on land ownership), the policy framework of family farming is obviously important.

3. Definitions of Family Farming and Family Farms

Hill (1993) provides an extensive discussion of FF definitions, including those based on labour in farm operations[4], and on ownership and/or control (e.g. succession) of business assets. Another possibility is the legal status of the farmer, i.e. one or more individuals (e.g. a "sole holder"), partnership, company, cooperative, trust, etc., which may be attractive in administrative terms, although, as Hill points out, national legislation differs, and there are many "family companies".

According to the current FAO (2013) definition: "*a family farm is an agricultural holding which is* ***managed and operated by a household*** *and where* ***farm labour is largely supplied by that household****"* (emphasis added), which avoids quantification but brings in the concept of "household", a term discussed below.

Working with FADN data, Hill (1993) used a three-way definition based on the ratio of family (strictly non-hired) to all farm labour measured in full-time work units (FWUs and AWUs), i.e. the farm is "family" if this ratio exceeds 0.95, "intermediate" if between 0.5 and 0.5 and "non-family" if under 0.5. On this definition, Table 1 shows the proportions of farm numbers, farm output, farm income (excluding all non-farming income) and labour (total and family) in the EU-15 in 2008. While Hill's FFs accounted for just over 57% of all FADN (i.e. commercial) farms (down from 70% in 1989 (in the EU-12), they produced only some 27% of output with 32% of total agricultural labour. In the same year, Hill's "non-family farms" accounted for 15% of EU-15 farms but produced half of all output with 45% of the total farm labour force. If Hill's "intermediate" farms are also classified as "family", FFs account for 85% of all FADN farms, half of EU-15 agricultural output, and 55% of total farm labour (or 87% of all family labour).

[4] Hill (1993) distinguishes between definitional concepts based on "labour" and on "operation", though not very clearly.

Table 1: Proportions (%) of FADN totals by family farm status, EU-12/15, 1989, 1995 and 2008				
Totals	Year	**Family farms**	**Intermediate farms**	**Non-Family farms**
Number of Farms	1989	70.4	22.9	6.8
	1995	66.6	24.7	8.7
	2008	57.0	27.5	15.5
Output	1989	54.3	27.1	18.5
	1995	39.9	26.9	33.2
	2008	27.4	22.6	50.0
Farming Income	1989	62.3	26.9	10.8
Total Labour	1989	63.8	23.7	12.5
	1995	50.2	24.2	25.6
	2008	32.1	22.8	45.1
Family Labour	1989	74.9	21.4	3.7
	1995	68.9	24.8	6.3
	2008	57.6	29.6	12.9

Notes: 1989: EU-12; 1995 and 2008 EU-15
Source: 1989 Hill (1993); 1995 and 2008 authors' calculations

By country, over 80% of FADN farms in Belgium, Ireland and Luxembourg in 1989 were classified by Hill (1993) as "family" (over 95% family labour), and produced over 80% of national output, while in the UK they accounted for 41% of all FADN farms, and only 16% of output. In all then-EU countries, the share of Hill's family farms had decreased between 1981 and 1989 (from 75% to 70%), except in the UK, where the corresponding shares were 32% in 1981 and 41% in 1989, ascribed by Hill to the displacement of regular hired labour, often by capital. As Hill acknowledges, the FADN covers over 90% of EU production but only about half of all registered farms (a fact which is still true; see below). He calculates that farming income per person (Agricultural Work Unit, AWU) on EU-12 FADN non-family farms in 1989 was about 3.5 times that on FFs.

Using the FAO definition (see above) with the interpretation that "largely" means over half, Table 2 shows fairly recent data and estimates for the EU (currently of 28, though FADN data was only available for an EU-25 excluding Cyprus, Malta and Croatia) by labour quartile. Farms with over half their labour supplied by the family accounted for 82% of all FADN farms, for about 40% of both output and all farm labour, and for 43% of all Utilised Agricultural Land (UAA). Farm sizes by various measures – area, business size (ESU) and labour (AWU) – by family labour quartile follow the expected pattern, with farms with under 25% of family labour being ten or more times larger than those with over 75% of family labour.

The right-hand column of Table 2 shows some rough estimates of the same variables once non-FADN farms are included. Assuming that virtually all non-FADN farms are family in type, and that they roughly double the total number of farms but increase land area and output only a little, then about 90% of all EU farms are "family" by the FAO definition, and these account for under 50% of agricultural land (UAA) and under 40% of output. The share of agricultural labour is (even) more speculative, in part since the actual "use" of family labour on very small farms is difficult to measure, but may be around a half. Compared to FADN results, the average size of FF is likely to be more than halved in land area and business size (ESU), but somewhat less in terms of labour.

Table 2: Share of Family Labour in Total Labour, EU-25, 2008

	FADN EU-25 Farms						*All EU Farms*
	0-25%	25-50%	50-75%	75-100%		50-100%	*(estimated)*
	Proportion (%) of each sub-group in:						
Number of farms	9.0	9.2	11.8	69.9		82	*90*
Total UAA	47.1	9.5	8.8	34.6		43	*48*
Output	47.9	13.0	9.9	29.2		39	*42*
Total labour (AWU)	50.2	9.5	8.4	31.9		40	*50*
	Average farm size according to:						
UAA (ha)	524	104	75	50		54	*20*
ESU	431	131	82	44		49	*20*
Total labour (AWU)	18.5	3.4	2.4	1.5		1.6	*1.0*

Note: EU-25 excludes Cyprus, Malta and Croatia.
Source: Davidova and Thomson (2014), except right-hand column (authors' judgemental estimates).

4. Challenges to Family Farming

All farms face challenges, from coping with natural and market variations on-farm and at the farmgate, to keeping abreast more widely of technology and policy. Family farmers, and especially small family farmers, may face some of these in a more severe form, and be less well equipped to do so, than other types. Without debating the likely or desirable future of European family farms, it is of economic interest to consider their strengths and weaknesses, as for instance identified in a SWOT analysis by Calus and Lauwers (2009) to explain the persistence of this type of farming amidst changing economic and social conditions:

Strengths: a flexible, loyal and knowledgeable labour force; a high degree of land ownership or security of tenure; flexibility in the use of physical capital and in the accumulation of finance (since profit need not be generated, and consumption can be reduced)

Weaknesses: difficult substitution of hired labour for family labour; lack of access to sufficient land and capital, given technical change

Opportunities: flexibility in altering farm structures; ability to exploit growing consumer demand for diversified, often location-specified products

Threats: withdrawal of labour, especially succession labour, to more attractive, often urban-based, occupations; inability to exploit scale economies, both in field machinery and in controlled environments (pigs, poultry, glasshouses).

Many of these points have been developed by other authors in terms of particular challenges to small family farmers. For example, Davidova and Thomson (2014) have classified such challenges into those of "access", "succession" and "quality of life", i.e.:

Access to

i) farm resources such as land and finance: with small amounts of farmland coming on to the market, and higher prices and buying charges often charged to smaller businesses for land purchase and credit, family farms are often more disadvantaged than others, who may also be more "footloose"

ii) markets: small farms find it more difficult to achieve equitable returns on mass markets given their lower quantities and perhaps less easily certified quality

iii) information: both education and advice (technical, business and policy) may be less available to single (or few) and often isolated individuals

iv) policy-making: while corporate farms are almost certainly represented in bodies such as chambers of commerce (or their managers and owners have direct contact with politicians), smaller family farms need to work through farmer associations (which may still be dominated by corporate or large family farms).

Succession: how to transfer the farm from one holder to another, usually in the next generation, given legal, fiscal and cultural constraints on the division of personal assets, usually as well as the need to finance retirement income.

Quality of life, especially for women and young people in isolated farmhouses or villages, for whom the attractions of city life are often stronger than for men working in the fields, with livestock, or in non-farm jobs. While this may be true for all farm labour, non-family labour is, almost by definition, freer of local ties. Close family ties can, of course, work both ways; they may keep some family labour at home for longer than would normally be the case, while inescapable domestic tensions may drive others away sooner.

5. Discussion Issues

Arising from the above, a number of issues suggest themselves for discussion. Some of these are treated briefly below.

1. What is the "best" economic theory of FF persistence/survival?

Summarising some of the material early in this paper, the following candidates are available:

- Chayanovian self-exploitation, based on deeply held (by some) personal valuations of independence and family solidarity (especially in the case of children and other non-holders expected to work on the farm)
- Lower costs of farm management, labour supervision and other transactions undertaken by the family farm holder in comparison to those incurred for non-family labour and in corporate structures
- Resilience to market and other (e.g. illness-induced) shocks which may be difficult for a non-family business to absorb at reasonable cost but which a family can deal with by reduced income and/or "emergency" labour or capital from family members or neighbours.

2. What is the "best" FF definition for policy?

Some conceptual possibilities have been discussed above. In practical (i.e. policy-or statistical) terms, only two options seem available:

- labour share: but should the threshold be 50% (FAO), 75% or 95% (Hill)?
- legal status: could CAP payments or national tax exemptions be restricted to "natural persons", as is done for (e.g.) social security payments?[5]

but there may be others, such as residence on or very near the farm.

It may be noted that, although the term "family farm" has been widely adopted in official and other circles (e.g. in food labelling), what is usually meant is ownership and operation of a farm by the members of a single household rather than of an extended family. However, it is often the case that members of the extended family – who may live on nearby farms or in distant cities or even countries – can play important roles, for example supplying labour during harvesting, farm machinery shared amongst family-linked farms, or providing finance in times of need (which may be most of the time on semi-subsistence family farms). Even the occasional contact from other family members can promote enterprise, provide advice and supply information of substantial use to a family farm. So, although "household farm", as distinguished from e.g. "corporate farm", may be a better description in terms of farming operations, "family farm" has its merits, particularly in terms of farm development (see below).

[5] The basic unit of the EU Farm Structure Survey (*http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Farm_structure_statistics*) is "*the agricultural holding, a technical-economic unit under single management engaged in agricultural production*", and "*the holder is the natural person (sole holder or group of individuals) or the legal person (for example, a cooperative or other institution) on whose account and in whose name the holding is operated and who is legally and economically responsible for the holding – in other words, the entity or person that takes the economic risks of the holding; for group holdings, only the main holder (one person) is counted"*. In 2010, 97.1% of EU-27 agricultural holders were natural persons; France alone accounted for around half of the holdings in the EU-27 that were under the control of legal entities or groups. However, the rising popularity of contract farming, partnerships, family companies and other forms of joint ventures in the UK, and elsewhere, suggests that the legal distinction may be weakening, both conceptually and numerically.

3. What public goods do/can FFs provide "better" than other forms of farm?

Economists are in the forefront of arguing that policy support should only be given in cases of clear social need (e.g. gross poverty) or the provision of public goods (or avoidance of public bads). The list of such goods related to agriculture is of course a long one, but includes valued landscape and biodiversity, conservation of soil or water, animal (and perhaps human) health, public access, carbon capture, and the preservation of rural culture, both on and off the farm.

It is not at all clear whether FFs provide any or all of these public goods more richly, widely and/or cheaply than other farms. It is widely believed that small farms (which are usually FFs) provide better landscape and cultural services than larger ones (which may be FFs or other), but even here evidence is mixed (see above). It may be that pollution events are more common amongst small (or family) farms but are on a smaller scale than fewer major spills or losses on large farms. And if policy support is more readily taken up by larger and/or corporate farms, then these may provide more (and more measurable) public goods.

4. Development paths for small/medium FFs

The heterogeneity of family farms – especially small ones – calls for the development of a systematic typology of these farms – or possibly their farmers - to help consider possible development paths for them. In a review of semi-subsistence farming in the EU (Davidova *et al*., 2013), the following paths were suggested:

- Disappearance (amalgamation or abandonment)
- Expansion
- Continuation with:
    - diversification and/or pluriactivity
    - older (second-career) successors.

Of course, the relative importance of these development paths in different countries and regions of EU MSs varies according to a number of factors, including the general prosperity of local agriculture, and the macroeconomic circumstances, locally and generally. Thus, for example, family farms in prosperous peri-urban areas with labour and marketing opportunities nearby may be expected to develop differently from those in remote areas, or in a country in deep recession. And, within this context, individual SSFs are likely to follow one or other path depending on the age, abilities and resources of the holder, and his/her possible successors.

5. Is the post-2014 CAP more FF-friendly?

This has been discussed by Davidova and Thomson (2014), and in more detail by Thomson and Dwyer (2013) for semi-subsistence farms which are almost all FFs. In general, it is concluded that:

- the new (but optional, for Member States) Small Farmer Scheme in Pillar 1 offers a simplified avenue of support for small FFs, but its long-term "fairness" *versus* standard Pillar 1 support needs monitoring: will such farms tend to be "forgotten" in future EU programming periods?
- the mandatory Young Farmer Schemes should help new FF entrants, but the absence of early retirement schemes (due to the fear of deadweight losses) may limit the availability of suitable holdings
- the wider support for producer organisations is welcome, but larger and perhaps more influential corporate farms as members of such organisations may reduce benefits to FFs
- other CAP reform measures, such as the risk management toolkit, mandatory Farm Advisory Services and European Innovation Partnerships may provide better support to FFs (Hennessy, 2014).

6. What pro-FF national/regional policies exist?

Due to legal and other complexities, this is largely unexplored territory on a multi-country basis – the recent SFC study of marketing cooperatives in eight commodity sectors for all EU Member States (Bijman *et al*., 2013) is an exception – although comparative studies of a few Member States exist. It would be useful to explore national policies and experience in areas such as other forms of producer organisation legislation and aid (e.g. for cooperatives, which are recognised in some countries but not others), tax exemptions (including business income averaging and land taxation[6]), inheritance legislation, and public research. All these interventions may, or may not, assist FFs more than other forms.

[6] See recent discussion in the UK House of Commons Scottish Affairs Committee (2014) as regards practice in some other countries.

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